



UNITED STATES PATENT AND TRADEMARK OFFICE

AT

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/654,411	09/03/2003	Daniel E. Hicks	P50-0085	5463

7590 02/08/2005
Alan A. Csontos
Michelin North America, Inc.
P.O. Box 2026
Greenville, SC 29602

EXAMINER

HUANG, SIHONG

ART UNIT PAPER NUMBER

2632

DATE MAILED: 02/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/654,411

Applicant(s)

HICKS, DANIEL E.

Examiner

Sihong Huang

Art Unit

2632

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Drawings

1. The subject matter of this application admits of illustration by a drawing to facilitate understanding of the invention. Applicant is required to furnish a drawing under 37 CFR 1.81(c). No new matter may be introduced in the required drawing. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d).
2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the sensor, the signal generator and the speed limiter of claim 1, the tire of claim 2, the anti-lock braking system of claim 4, and the annular insert and the thickened sidewall of claim 5 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet"

Art Unit: 2632

pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

3. The abstract of the disclosure is objected to because it is not limited to a single paragraph (see (j) of the Content of Specification below). Correction is required. See MPEP § 608.01(b).
4. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed. See (a) of the Content of Specification below.

Content of Specification

- (a) **Title of the Invention**: See 37 CFR 1.72(a) and MPEP § 606. The title of the invention should be placed at the top of the first page of the specification unless the title is provided in an application data sheet. The title of the invention should be brief but technically accurate and **descriptive**, preferably from two to seven words may not contain more than 500 characters.
- (b) **Cross-References to Related Applications**: See 37 CFR 1.78 and MPEP § 201.11.
- (c) **Statement Regarding Federally Sponsored Research and Development**: See MPEP § 310.
- (d) **Incorporation-By-Reference Of Material Submitted On a Compact Disc**:
- (e) **Background of the Invention**: See MPEP § 608.01(c).
 - (1) **Field of the Invention**:
 - (2) **Description of the Related Art including information disclosed under 37 CFR 1.97 and 37 CFR 1.98**:
- (f) **Brief Summary of the Invention**: See MPEP § 608.01(d).
- (g) **Brief Description of the Several Views of the Drawing(s)**: See MPEP § 608.01(f). A reference to and brief description of the drawing(s) as set forth in 37 CFR 1.74.
- (h) **Detailed Description of the Invention**: See MPEP § 608.01(g).
- (i) **Claim or Claims**: See 37 CFR 1.75 and MPEP § 608.01(m).
- (j) **Abstract of the Disclosure**: See MPEP § 608.01(f). A brief narrative of the disclosure as a whole in a **single paragraph** of 150 words or less commencing on a separate sheet following the claims. In an international application which has entered the national stage (37 CFR 1.491(b)), the applicant need not submit an abstract commencing on a separate sheet if an abstract was published with the

Art Unit: 2632

international application under PCT Article 21. The abstract that appears on the cover page of the pamphlet published by the International Bureau (IB) of the World Intellectual Property Organization (WIPO) is the abstract that will be used by the USPTO. See MPEP § 1893.03(e).

- (k) Sequence Listing. See 37 CFR 1.821-1.825 and MPEP §§ 2421-2431.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 3 and 4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 3 depends on claim 2. Claim 2 requires that a single sensor detects more than one conditions while claim 3 claims that the sensor is a tire pressure sensor which can only detect one condition, i.e., tire pressure. Therefore, claim 3 is conflict with claim 2. And, the limitation of claim 3 causes confusion and renders the claims unclear as to the capability of the single sensor, i.e., whether the single sensor detects merely one condition or more than one conditions.

Claim 4 is also rejected because it depends on claim 3.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this

Art Unit: 2632

subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 1 and 6 are rejected under 35 U.S.C. 102(e) as being anticipated by Faye (US Pat. No. 6,510,375 B2).

Regarding claim 1, Faye disclosed a speed limiting system (10, see Figs. 1 and 3) for a vehicle (col. 2, lines 36-37 and col. 1, lines 38-47) comprising:

- (a) sensor (tire pressure loss detecting device/sensor 32) for detecting tire failure (e.g., loss of tire pressure, see Fig. 1);
- (b) signal generator (Brake Control Unit 12 and Motor Control Unit 18) to transmit a signal indicating tire failure (col. 2, lines 52-56);
- (c) speed limiter (Brake Actuator Devices 16 and Actuating Device (Motor) 22) for controlling vehicle speed to receive said signal (see Fig. 1), and limit vehicle speed according to (step 108, see Fig. 3; and col. 4, lines 51-54);
- (d) a selected speed profile (col. 3, line 40 and col. 4, lines 5-8) which goes from an initial higher speed to a lower speed (col. 3, lines 30-40).

Regarding claim 6, Faye in Fig. 2, and col. 3, lines 15-21 and lines 43-55 clearly disclosed the information/relationship on the specific mileage and speed capabilities of the tire.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Faye (US Pat. No. 6,510,375 B2) in view of admitted prior art by applicant.

Regarding claim 5, Faye in col. 3, lines 39-40 and col. 4, lines 5-8 disclosed that a profile is provided and stored in advance for each type of tire. Faye differs from claim 5 in that Faye does not specifically disclose the claimed types of tire (i.e., including an annular insert or a thickened sidewall to support the tire in the event of pressure loss) profile or a default profile. However, since the profile of Faye is generated according to each type of tire, and the claimed types of tire are admitted by applicant to be well known and well established in the art (page 2, lines 22-25 of the marked-up specification of the present invention, or paragraph [0012] of the PG-Pub #2004/0107036 A1 of the present invention), it would have been obvious that the profile of Faye can be generated according to such well known and well established type of tire and/or any other standard type of tire. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to include a profile generated according to the claimed type of tire to cover all types of tire available in the market and therefore providing a more accurate system accordingly.

11. Claims 2-4 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Faye (US Pat. No. 6,510,375 B2) in view of Nantz et al. (US Pat. No. 6,671,609 B2).

Regarding claim 2, Faye in col. 3, lines 27-28 disclosed that the sensor (32) detects tire inflation pressure (air pressure in the tire when the tire is in an inflated state). Faye differs from claim 2 in that Faye does not disclose that the sensor (32) detects other

Art Unit: 2632

condition(s) as cited besides tire pressure. However, Nantz et al. disclosed such (tire sensor 32 measures the air pressure and temperature within the tire 22, see col. 3, lines 17-19). Similar to Faye, Nantz et al. disclosed a tire pressure initiated vehicle speed limiting system and method. In addition, the speed limiting system of Nantz et al. is also responsive to tire temperature because tire temperature is an important factor in determining the condition of the tire as well as limiting the vehicle speed accordingly (col. 5, line 66 to col. 6, line 2). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the sensor of Faye with the teaching of Nantz et al. to measure both air pressure and temperature within the tire in order to more accurately determine the tire condition and limiting the vehicle speed accordingly.

Regarding claims 3 and 4, both Faye and Nantz et al. disclosed a tire pressure sensor (32) for directly measuring tire pressure. See Faye in col. 3, lines 27-29 and col. 1, lines 25-26, and Nantz et al. in col. 3, lines 17-19.

Regarding claim 7, although Faye in col. 2, line 67 disclosed that providing the position of the flat tire on the vehicle is a recognized procedure in the art, Faye didn't specifically disclose that such information is included in the signal for the speed limiting system 10. However, Nantz et al. disclosed such (col. 4, line 59) because it provides a more accurate and appropriate vehicle speed value for the speed limiting system (col. 4, lines 50-61). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to include tire location information to the speed limiting system of

Art Unit: 2632

Faye with the teaching of Nantz et al. for a more appropriate and accurate speed limiting system.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Nantz et al. (US Pat. No. 6,671,609 B2 and US Pat. No. 6,434,470 B1) are cited to show a tire pressure and/or temperature vehicle speed limiting system.

McCurdy (US Pat. No. 6,556,915 B2) is cited to show a system and method for controlling (or limiting) vehicle cruise speed (or vehicle speed) when a tire condition is detected.

Yamamoto (US Pat. No. 5,546,308) is cited to show apparatus for controlling vehicle speed in response to a road holding ability change.

Hopkins et al. (US Pat. No. 6,498,967 B1) is cited to show a tire initiated vehicle control system.

Muller et al. (DE 3308080 A1) is cited to show a safety system automatically sets tire pressure to vehicle speed or limits speed by comparing measured speed and pressure with stored relationship.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sihong Huang whose telephone number is 571-272-2958. The examiner can normally be reached on Mon, Thu & Fri.

Art Unit: 2632

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel J. Wu can be reached on 571-272-2964. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Sihong Huang
January 31, 2005

A handwritten signature in black ink, appearing to read 'Sihong Huang', with a large, stylized circular flourish at the bottom.